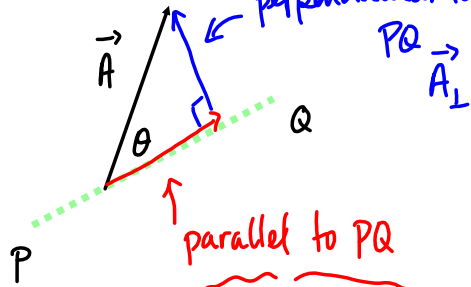
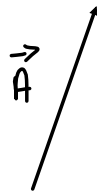


Resolving a vector into parallel and perpendicular components in relation to direction PQ.



$$A_{\perp} = A \sin \theta$$

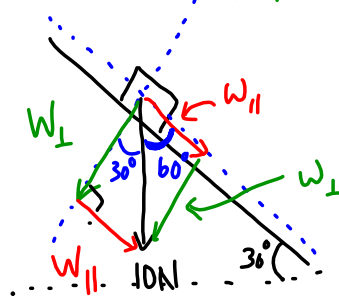
perpendicular to PQ

$$A_{||} = A \cos \theta$$

Example

A 10N weight is placed on a board which is inclined at an angle of 30° to the horizontal.

Determine the components of the weight acting down the incline and normal to the incline. (parallel to incline), (perpendicular)



$$W_{||} = W \cos \theta$$

$$W_{||} = (10N) \cos 60^\circ$$

$$W_{||} = 5N$$

$$W_{\perp} = W \sin \theta$$

$$W_{\perp} = (10N) \sin 60^\circ$$

$$W_{\perp} = 8.7N$$

